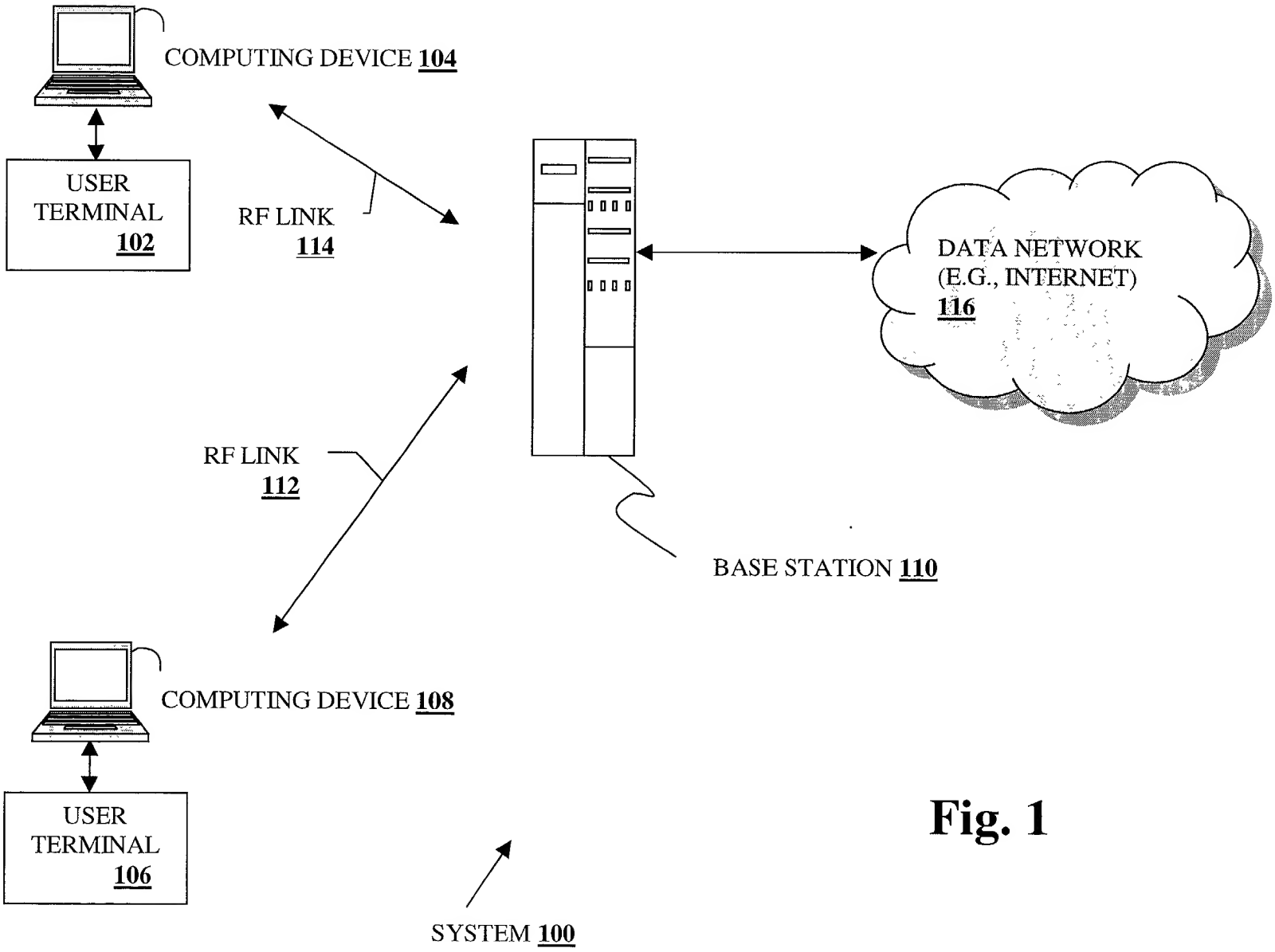
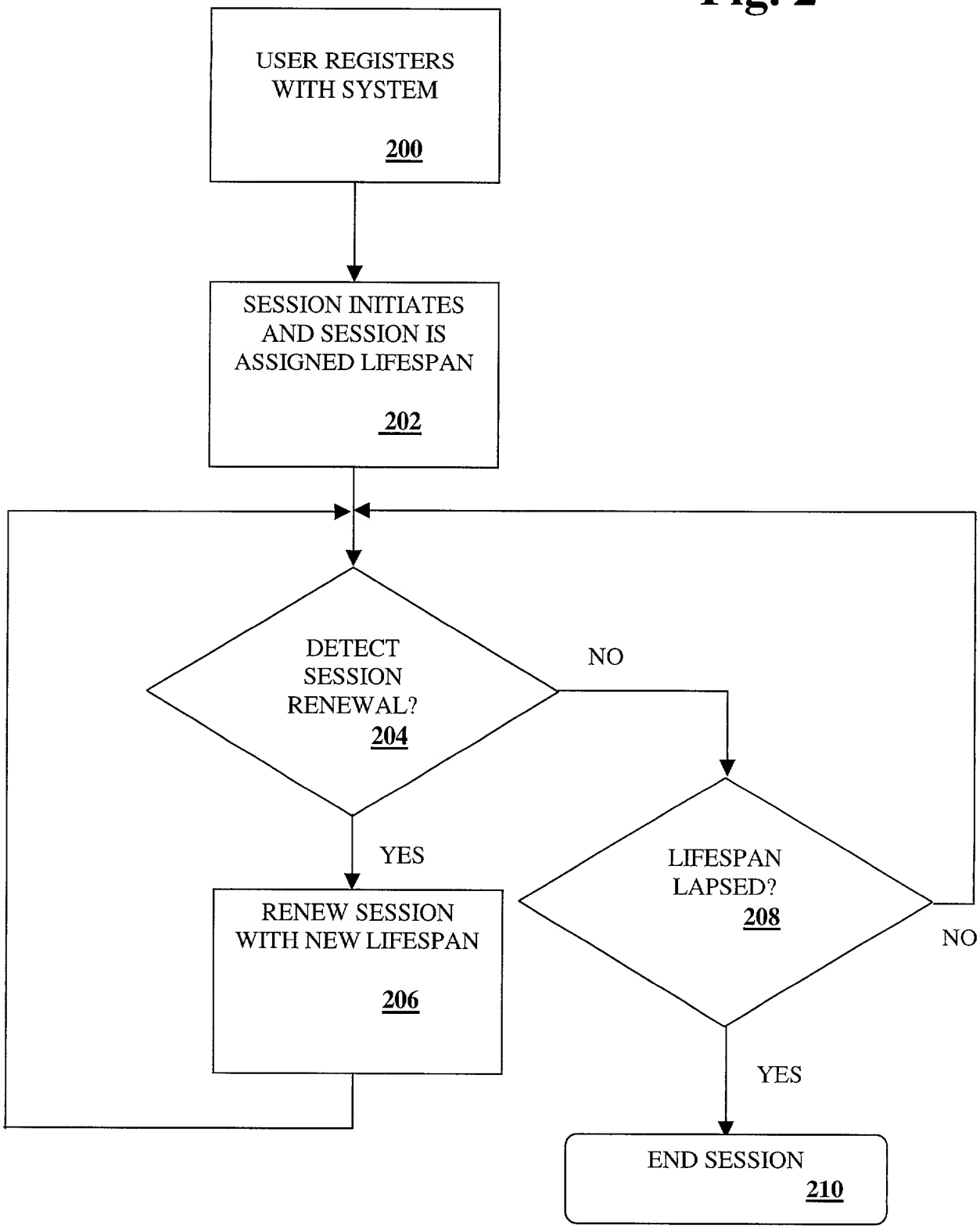

COMPUTING DEVICE 104
USER TERMINAL 102
RF LINK 114
DATA NETWORK (E.G., INTERNET) 116
RF LINK 112
BASE STATION 110
COMPUTING DEVICE 108
USER TERMINAL 106
SYSTEM 100

Fig. 1

Fig. 2


USER REGISTERS WITH SYSTEM
200
SESSION INITIATES AND SESSION IS ASSIGNED LIFESPAN
202
DETECT SESSION RENEWAL?
204
NO
YES
RENEW SESSION WITH NEW LIFESPAN
206
LIFESPAN LAPSED?
208
NO
YES
END SESSION
210

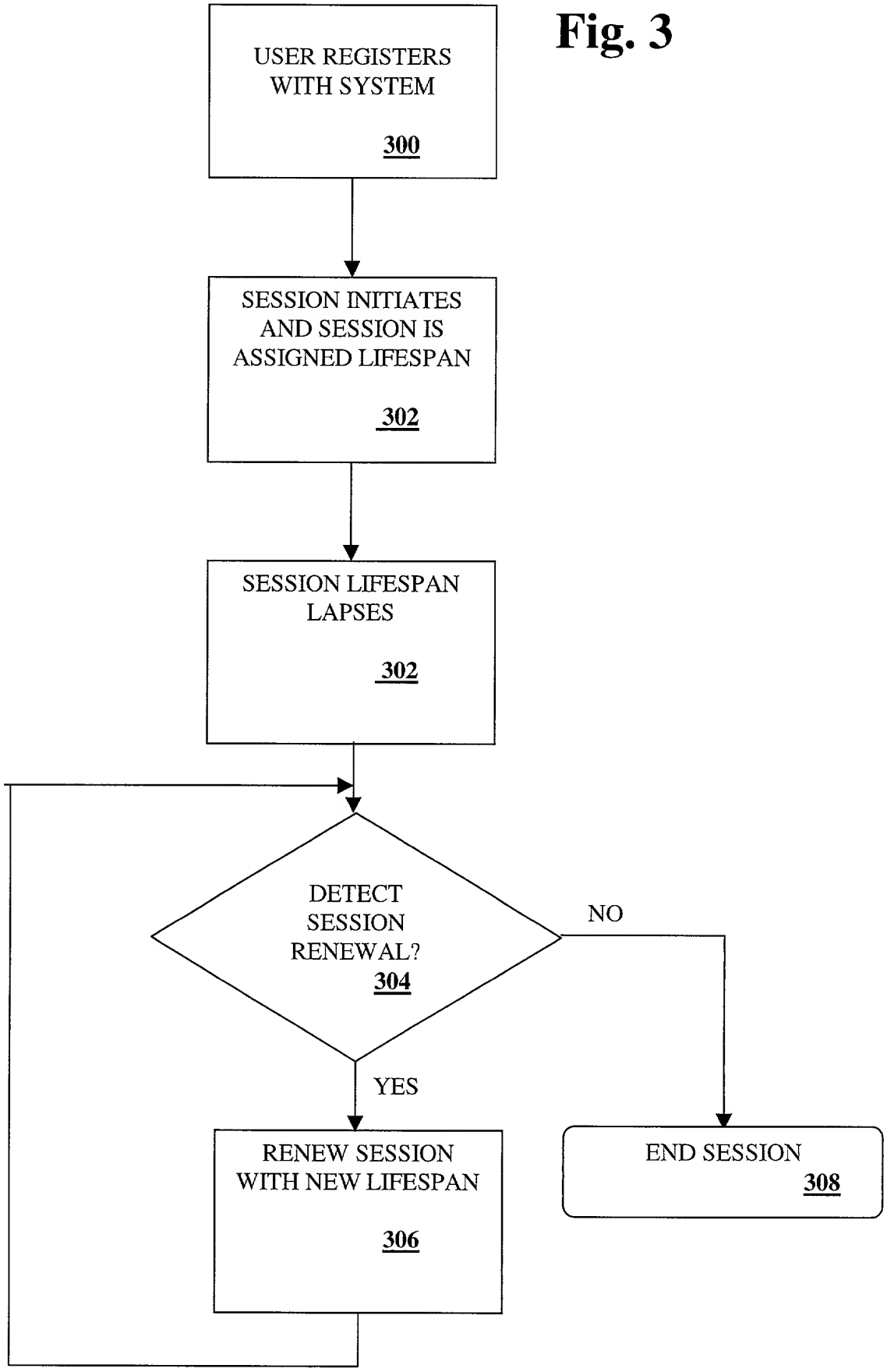

USER REGISTERS WITH SYSTEM
300
SESSION INITIATES AND SESSION IS ASSIGNED LIFESPAN
302
SESSION LIFESPAN LAPSES
302
DETECT SESSION RENEWAL?
304
NO
YES
RENEW SESSION WITH NEW LIFESPAN
306
END SESSION
308

Fig. 3

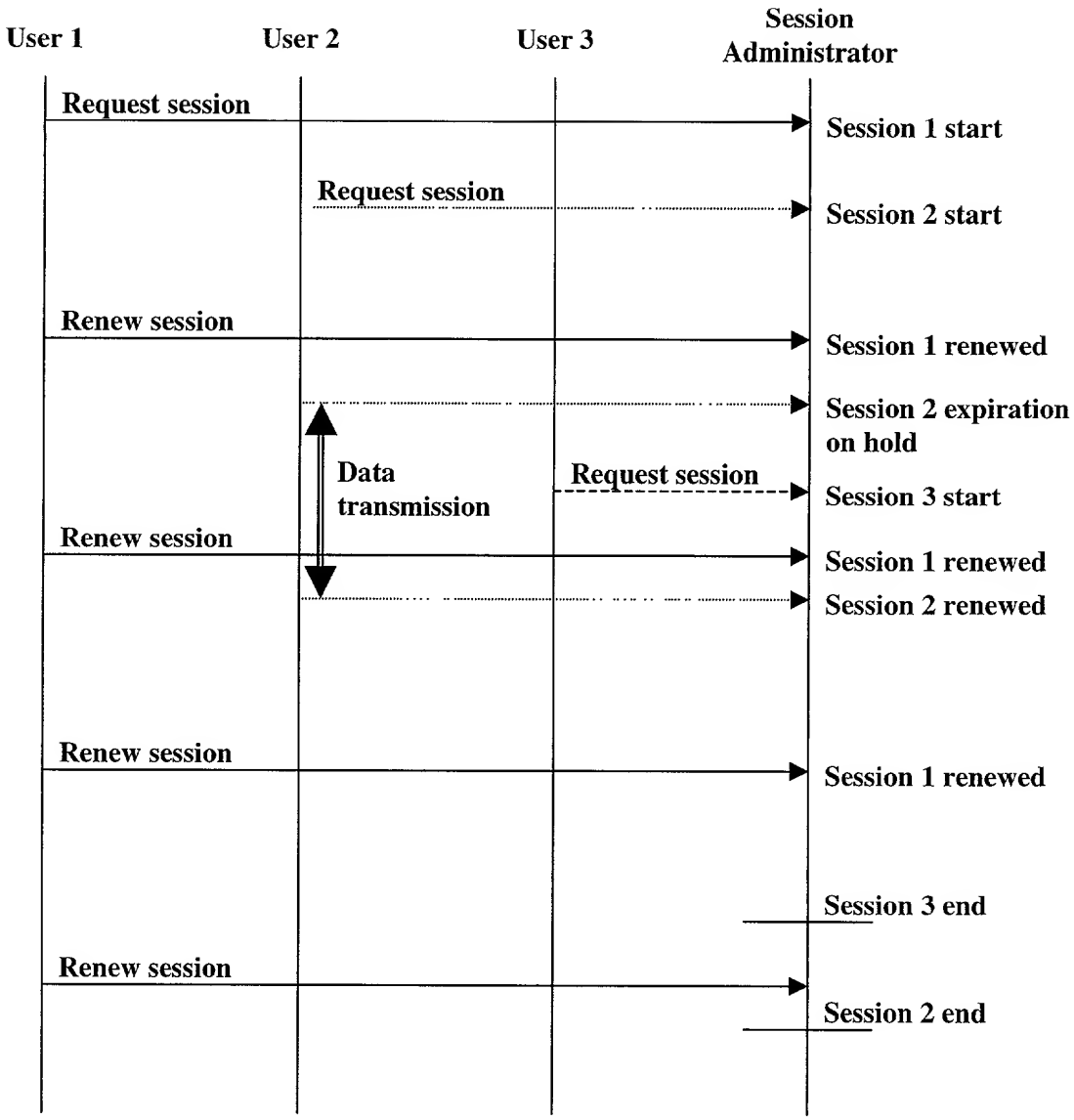

User 1
User 2
User 3
Session Administrator
Request session
Session 1 start
Request session
Session 2 start
Renew session
Session 1 renewed
Session 2 expiration on hold
Data transmission
Request session
Session 3 start
Renew session
Session 1 renewed
Session 2 renewed
Renew session
Session 1 renewed
Session 3 end
Renew session
Session 2 end

Fig. 4

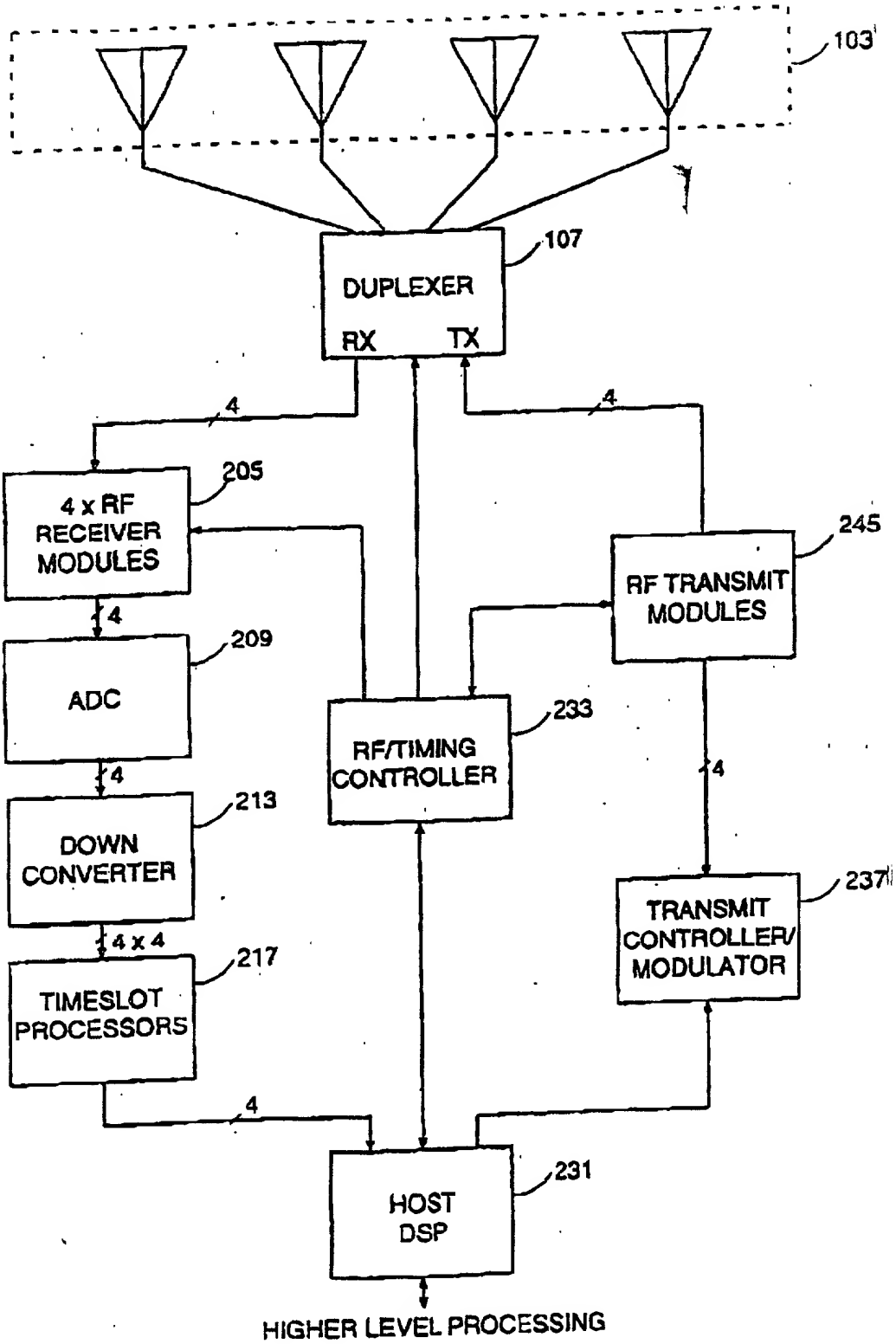

103
DUPLEXER
RX
TX
107
4
4
4 x RF
RECEIVER
MODULES
205
4
ADC
209
4
DOWN
CONVERTER
213
4 x 4
TIMESLOT
PROCESSORS
217
RF/TIMING
CONTROLLER
233
RF TRANSMIT
MODULES
245
4
TRANSMIT
CONTROLLER/
MODULATOR
237
4
HOST
DSP
231
HIGHER LEVEL PROCESSING

Figure 5

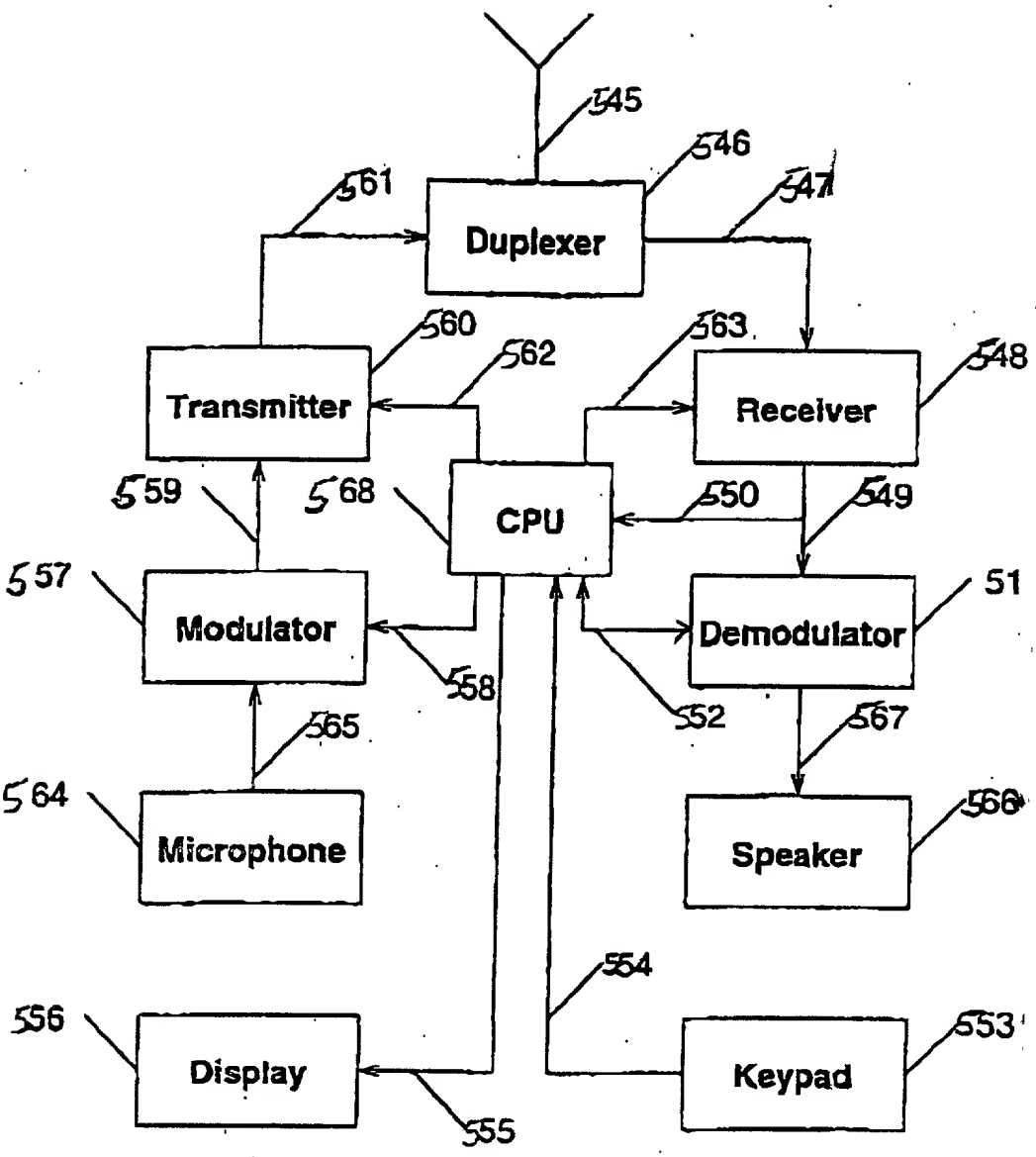

545
546
547
561
Duplexer
560
562
563
548
Transmitter
Receiver
559
568
550
549
CPU
557
Modulator
Demodulator
51
558
552
567
565
564
Microphone
Speaker
566
554
556
553
Display
Keypad
555

FIG. 6

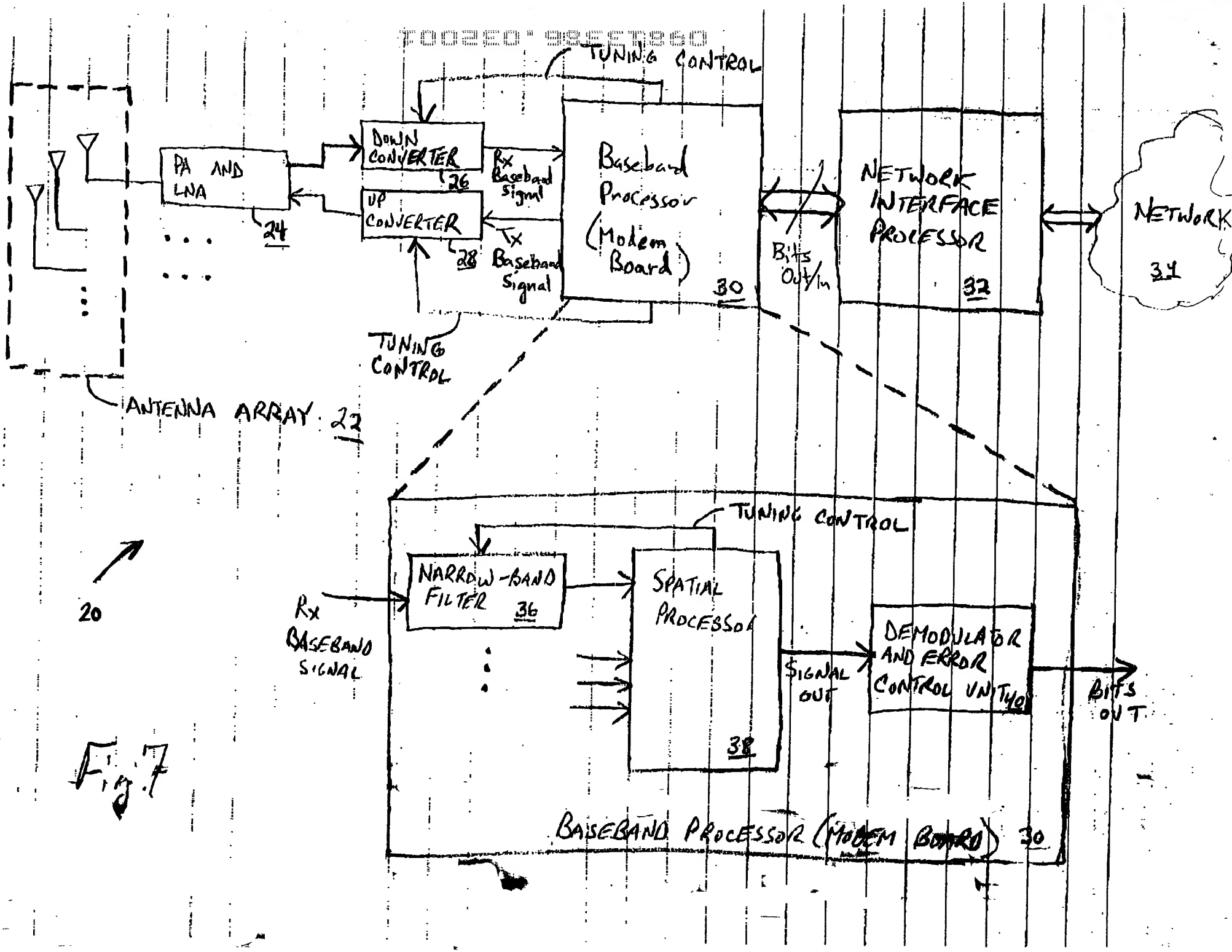

TUNING CONTROL
DOWN CONVERTER
26
PA AND LNA
24
UP CONVERTER
28
Rx Baseband signal
Tx Baseband Signal
Baseband Processor (Modem Board)
30
Bits Out/In
NETWORK INTERFACE PROCESSOR
32
NETWORK
34
TUNING CONTROL
ANTENNA ARRAY 22
20
TUNING CONTROL
NARROW-BAND FILTER 36
Rx BASEBAND SIGNAL
SPATIAL PROCESSOR
38
SIGNAL OUT
DEMODULATOR AND ERROR CONTROL UNIT 40
BITS OUT
BASEBAND PROCESSOR (MODEM BOARD) 30

Fig. 7